

JOB DESCRIPTION AND POSITION CLASSIFICATION

CLASSIFICATION Engineer, Water Resources		DWR POSITION NUMBER 2064-3137-004	SAP POSITION NUMBER 50002608	MCR 1
APPOINTEE Vacant		SAP PERSONNEL NO. TBD	DIVISION/SECTION O&M/ADMWM/Near-Term Modeling Unit	
COLLECTIVE BARGAINING IDENTIFIER Management Related BU: ☐ Supervisory Related BU: ☐ Confidential Related BU: ☒ Rank and File BU: R09				
RESPONSIBILITIES EXERCISED ☐ Supervisory ☐ Lead Person		IMMEDIATE SUPERVISOR (Print) Vacant		SUPERVISOR'S CLASSIFICATION Senior Engineer, Water Resources
APPROVED BY (Personnel Analyst's Name) Taylor Marshall				DATE 8/4/2026
<i>Percent of Time</i>	<i>Activity</i>			
	POSITION SUMMARY: Under the direction of the Manager of the Near-Term Modeling Unit, the Engineer, Water Resources, is responsible for monitoring and analyzing data and providing engineering studies pertaining to State Water Project (SWP) operations. The Unit is responsible for monitoring, modeling, analyzing, and providing advice on SWP operations as they affect compliance with Federal, State, and local institutional and environmental policies, procedures, and regulations in the Sacramento-San Joaquin Delta. ESSENTIAL FUNCTIONS This position requires the incumbent to work cooperatively with others, maintain regular, consistent, predictable attendance, analyze situations accurately and take effective action, exercise good judgment, analyze information and effectively complete work assignments, and develop and maintain good working knowledge of policies, regulations and procedures.			
35%	Implement, apply, and interpret numerical and statistical flow and water quality models. Utilizing the Delta Simulation Model 2 (DSM2), forecast and analyze flow and water quality data for use in improving SWP/Central Valley Project (CVP) operational efficiency in meeting regulatory criteria contained in SWP/CVP water rights permits. Use model results to clarify the understanding of flow-salinity relationships of alternative operations at key Delta locations. Communicate conclusions and results both orally and in writing.			
25%	Simulate SWP operational alternatives using the DSM2 Aqueduct model to generate water quality forecasts for the California Aqueduct. Generate volumetric and constituent fingerprints for the Delta. Run the DSM2 Particle Tracking Model (PTM) to clarify the impact of alternative operations to fisheries.			
25%	Develop numerical and software tools to improve the accuracy of forecasts, streamline processing of data and automate the generation graphics and reports. This may require knowledge of programming languages such as VBA and Python as well as the ability process large data sets.			
SUPERVISOR'S STATEMENT: I HAVE DISCUSSED THE DUTIES OF THE POSITION WITH THE EMPLOYEE.				
SUPERVISOR'S NAME (Print) Vacant		SUPERVISOR'S SIGNATURE ➤		DATE
EMPLOYEE'S STATEMENT: I HAVE DISCUSSED WITH MY SUPERVISOR THE DUTIES OF THE POSITION AND HAVE RECEIVED A COPY OF THE DUTY STATEMENT.				
EMPLOYEE'S NAME (Print) Vacant		EMPLOYEE'S SIGNATURE ➤		DATE

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10%	Work with and support other sections in the Division with special engineering studies. This may require use of modeling tools such as CalSim II, DSM2 and CE-Qual-W2 among others.			
5%	Analyze, maintain, and update hydrologic and water quality data used for real-time Delta compliance of water rights, endangered species, and other regulatory criteria. Act for Unit Manager when necessary. This may require the operation of a vehicle on public roadways and travel to remote areas.			
	KNOWLEDGE, SKILLS, AND ABILITIES The incumbent must be able to utilize computers effectively to analyze data/information accurately under tight time constraints, communicate effectively, both orally and in writing, and maintain good interpersonal relationships while working (whether independently or in groups).			
	SPECIAL REQUIREMENTS All employees are responsible for contributing to an inclusive, safe, and secure work environment that values diverse cultures, perspectives, and experiences, and is free from discrimination. Must be willing to sometimes work outside of normal business hours, travel, and stay overnight in various locations throughout the State of California. The Department of Water Resources is committed to its mission and employees, and we are grounded in our commitment to public safety. Regular, consistent, and predictable attendance is essential to the successful performance in this position. Employees are required to successfully complete all safety training related to the functions of the job. Range D of this classification requires possession of a valid certification registration as a civil engineer issued by the California State Board of Registration for Professional Engineers.			
	OTHER REQUIREMENTS This position provides necessary support to the Divisions of Flood Management, Safety of Dams, Operations and Maintenance, Engineering, and/or the Public Affairs Office during Governor declared emergencies, flood, dam, SWP, and other incidents and emergencies. Additionally, this position may participate in emergency operations in the capacity of area teams, field inspection, coordination, and assist agencies such as CalOES and FEMA in disaster work, including performing fieldwork to complete damage survey reports for droughts, flooding, earthquakes, and other emergencies. This position may also serve in one of the sections as established in the Incident Command System to assist the Department in performing its emergency preparedness, response, recovery, and mitigation functions. These functions are established in the California State Emergency Plan and the Department's Administrative Orders.			